

**N.J.A.C. 7:27**

**SUBCHAPTER 11  
INCINERATORS**

**Statutory authority for chapter:** N.J.S.A. 13:1B-3, 13:1B-3(e), 13:1D-9, 13:1D-134 et seq., 26:2C-1 et seq., in particular 26:2C-9b(7)(b), 9.2 and 9.5, 26:2C-8 et seq., specifically 26:2C-8, 8.1 through 8.5, 8.11, and 39:8-61.

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For regulatory history and effective dates see the New Jersey Administrative Code

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**7:27-11.1 Definitions**

The following words and terms, when used in this subchapter, shall have the following meanings unless the context clearly indicates otherwise.

“Auxiliary fuel” means fuel other than waste materials used to attain temperatures sufficiently high to dry and ignite waste materials, to maintain ignition, or to effect complete combustion of combustible solids, vapors and gases.

“Common incinerator” means an incinerator designed and used to burn waste materials of Types 0, 1, 2 and 3 only, in all capacities not exceeding 2,000 pounds per hour of waste material input.

“Control apparatus” means any device which prevents or controls the emission of any air contaminant.

“Department” means the State Department of Environmental Protection.

“Existing incinerator” means an incinerator purchased, acquired or used before the effective date of this subchapter.

“Incinerator” means any device, apparatus, equipment or structure used for destroying, reducing or salvaging by fire any material or substance including but not limited to

refuse, rubbish, garbage, trade waste, debris or scrap or a facility for cremating human or animal remains.

“Liquid particles” means particles which have volume but are not of rigid shape and which upon collection tend to coalesce and create uniform homogeneous films upon the surface of the collecting media.

“Multiple chamber incinerator” means an incinerator with two or more refractory-lined combustion chambers in series physically separated by refractory walls, interconnected by gas passages, and employing adequate design parameters necessary for maximum combustion of the waste materials.

“Municipal incinerator” means an incinerator owned or operated by government or by a person who provides incinerator service to government or others, and designed and used to burn waste materials of any and all types, 0 to 6 inclusive.

“New incinerator” means an incinerator purchased or constructed after the effective date of this Subchapter.

“Particles” means any material, except uncombined water, which exists in a finely divided form as liquid particles or solid particles at standard conditions.

“Pathological waste incinerator” means an incinerator designed and used to burn Type 4 waste materials, primarily human and animal remains, in all burning capacities. Crematoriums are included in this category.

“Ringelmann smoke chart” means the “Ringelmann Scale for Grading the Density of Smoke” published by the United States Bureau of Mines or any chart, recorder, indicator or device for the measurement of smoke density which is approved by the Department as the equivalent of the Ringelmann Scale.

“Single flue-fed incinerator” means an incinerator provided with a single flue which serves as both the charging chute and the flue to transport products of combustion to the atmosphere.

“Smoke” means and includes small gas-borne and air-borne particles arising from a process of combustion in sufficient number to be observable.

“Solid particles” means particles of rigid shape and definite volume.

“Special incinerator” means a municipal, pathological waste, or trade waste incinerator of any burning capacity, or any incinerator with a burning capacity in excess of 2,000 pounds per hour.

“Standard conditions” means 70 degrees Fahrenheit and one atmosphere pressure (14.7 psia or 760 mm Hg).

“Trade waste incinerator” means an incinerator designed and used to burn waste material primarily of Types 5 and 6, either separately or together with waste materials of Types 0, 1, and 3.

“Type 0 waste” means trash, a mixture of highly combustible waste such as paper, cardboard, cartons, wood boxes and combustible floor sweepings, containing approximately ten per cent moisture and five per cent incombustible solids, and having a heating value of approximately 8,500 British Thermal Units per pound as fired, and deriving from commercial and industrial activities. The mixtures contain up to ten per cent by weight of plastic bags, coated paper, laminated paper, treated corrugated cardboard, oily rags and plastic or rubber scraps.

“Type 1 waste” means rubbish, a mixture of combustible waste such as paper, cardboard cartons, wood scraps, foliage and combustible floor sweepings, containing approximately 25 per cent moisture and ten per cent incombustible solids and having a heating value of approximately 6500 British Thermal Units per pound as fired, and deriving from domestic, commercial and industrial activities. The mixture contains up to 20 per cent by weight of restaurant or cafeteria waste, but contains little or no treated paper, plastic or rubber wastes.

“Type 2 waste” means refuse, consisting of an approximately even mixture of rubbish and garbage by weight, containing up to 50 per cent moisture and approximately seven per cent incombustible solids, and having a heating value of approximately 4300 British Thermal Units per pound as fired, and commonly deriving from apartment and residential occupancy.

“Type 3 waste” means garbage, consisting of animal and vegetable wastes containing up to 70 per cent moisture and up to five per cent incombustible solids and having a heating value of approximately 2500 British Thermal Units per pound as fired and deriving from restaurants, cafeterias, hotels, hospitals, markets, and like installations.

“Type 4 waste” means human and animal remains, consisting of carcasses, organs and solid organic wastes from hospitals, laboratories, abattoirs, animal pounds, and similar sources, consisting of up to 85 per cent moisture and approximately five per cent incombustible solids and having a heating value of approximately 1,000 British Thermal Units per pound as fired.

“Type 5 waste” means by-product waste, gaseous, liquid or semi-liquid, such as tar, paints, solvents, sludge, fumes, and so forth, from industrial operations.

“Type 6 waste” means solid by-product waste, such as rubber, plastics, wood waste and so forth, from industrial operations.

### **7:27-11.2 Construction standards**

- (a) No person shall construct, install, use or cause to be used any existing or new incinerator unless such incinerator is of the multiple chamber type or of a type approved by the Department as being equally effective for the purpose of air pollution control.
- (b) Two years from the effective date of this Subchapter, no person shall use or cause to be used an existing incinerator unless such incinerator is of multiple chamber type or type approved by the Department as being equally effective for the purpose of air pollution control.
- (c) No person shall construct, install, use or cause to be used any new single flue-fed incinerator.

### **7:27-11.3 Emission standards**

- (a) Particles emission standards shall be as follows:

1. No person shall construct, install, use or cause to be used any new common incinerator or alter or relocate and use or cause to be used any existing common incinerator which will emit more than 0.2 grains of particles including ash per cubic foot of dry flue gas at standard conditions corrected to 12 per cent carbon dioxide by volume excluding the contribution of auxiliary fuel.
2. No person shall construct, install, use, or cause to be used any new special incinerator or alter or relocate and use or cause to be used any existing special incinerator which will emit more than 0.1 grains of particles including ash per cubic foot of dry flue gas at standard conditions corrected to 12 percent carbon dioxide by volume excluding the contribution of auxiliary fuel.
3. Two years from the effective date of this Subchapter no person shall use or cause to be used any existing common incinerator which will emit more than 0.2 grains of particles, including ash per cubic foot of dry flue gas at standard conditions corrected to 12 per cent carbon dioxide by volume excluding the contribution of auxiliary fuel.
4. Two years from the effective date of this Subchapter no person shall use or cause to be used any existing special incinerator which will emit more than 0.1 grains of particles, including ash per cubic foot of dry flue gas at standard conditions corrected to 12 per cent carbon dioxide by volume excluding the contribution of auxiliary fuel.

- (b) Smoke emission standards shall be as follows:

1. The provisions of Subchapter 3 (Control and Prohibition of Smoke From Combustion of Fuel) of this Chapter insofar as they relate to smoke from incinerators are superseded by this subsection.

2. No person shall cause, suffer, allow or permit smoke from any incinerator the shade or appearance of which is darker than Number 1 of the Ringelmann smoke chart:

i. To be emitted into the open air; or

ii. To be emitted of such opacity within a stack or chimney, or exclusive of water vapor, of such opacity leaving a stack or chimney to a degree greater than the emission designated as Number 1 of the Ringelmann smoke chart.

3. The provisions of paragraph 2 of this subsection shall not apply to:

i. Smoke emitted during the building of a new fire, the shade or appearance of which is not greater than Number 2 of the Ringelmann smoke chart for a period of three consecutive minutes; or

ii. Emissions of such opacity within a stack or chimney, or exclusive of water vapor, of such opacity leaving a stack or chimney to a degree greater than the emission designated as Number 2 of the Ringelmann smoke chart for a period not greater than three consecutive minutes.

(c) No person shall cause, suffer, allow or permit the emission of particles of unburned waste or ash from any common incinerator or from any special incinerator which are individually large enough to be visible while suspended in the atmosphere.

(d) No person shall construct, install, use or cause to be used any common incinerator or any special incinerator which will result in odors being detectable by sense of smell in any area of human use or occupancy.

(e) Stack test emission standards shall be as follows:

1. Any person responsible for the construction, installation, alteration or use of an incinerator shall, when ordered by the Department, provide the facilities and necessary equipment for determining the density of smoke being discharged from a stack or chimney and shall conduct such smoke tests using methods approved by the Department. All smoke test data shall be recorded in a permanent log at such time intervals as specified by the Department. The data shall be maintained for a period of not less than one year and shall be available for review by the Department.

2. Any person responsible for the use of a new or existing incinerator shall upon request of the Department provide such sampling facilities and testing facilities exclusive of instruments and sensing devices as may be necessary for the Department to determine the nature and quantity of emissions from such incinerators and shall during such testing, operate the incinerator at a charging rate of waste no less than the

designed capacity of the incinerator using materials representative of the types of wastes normally burned. Such facilities may be either permanent or temporary, at the discretion of the person responsible for their provision, and shall conform to all applicable laws and regulations concerning safe construction or safe practice.

#### **7:27-11.4 Permit to construct; certificate to operate**

(a) No person shall construct or install any new incinerator, or any new control apparatus, or alter any existing incinerator, or any existing control apparatus without first having obtained a permit which authorizes the construction, installation, or alteration. The permit may be a preconstruction permit and certificate under N.J.A.C. 7:27-8, an operating permit under N.J.A.C. 7:27-22, or a facility-wide permit as defined at N.J.A.C. 7:1K-1.5.

(b) No person shall use or cause to be used any new or altered incinerator, or any new or altered control apparatus, if the equipment or control apparatus is subject to permit requirements at N.J.A.C. 7:27-8, without first having obtained an operating certificate to operate control apparatus or equipment from the Department, in accordance with N.J.A.C. 7:27-8.

#### **7:27-11.5 Operation**

(a) Written procedures to be followed for proper operation and maintenance for a new incinerator, or an altered existing incinerator, shall be submitted to the Department for review and approval together with the application for a certificate to operate.

(b) Any person in possession of a certificate to operate an incinerator shall maintain said certificate readily available on the operating premises. Operating procedures and rated burning capacity of the incinerator shall be posted at a convenient place as near as practical to the point of operation.

(c) No person shall use or cause to be used any incinerator unless all components connected, or attached to, or serving the incinerator, including control apparatus are functioning properly and are in use, in accordance with the permit to construct, and the certificate to operate.

#### **7:27-11.6 Exceptions**

The provisions of this Subchapter shall not apply to incinerators installed or used in one or two-family dwellings or in multi-occupied dwellings containing six or less family units one of which is owner occupied.